Building Consistency Meeting Minutes – 7.5.17 RESIDENTIAL

Public Attendance (Contractors, Architects, Engineers): 12

MCCE Staff Attendance: 37

Overview of Today's Agenda

- Today's agenda items: 3 recap, 9 new.
- Today's training topic – **No training today.**

Welcome, Housekeeping, & Customer Service

- Mecklenburg County Code Enforcement is abbreviated as MCCE throughout the minutes.
- Consistency meetings in all trades will maintain the 4-hour format with 2-hours for consistency items and 2-hours allotted for ISO & CE for the time being. Code Administrator staff are evaluating this strategy for possible modification. With regard to staff ISO hours, these meetings & trainings are able to be counted as Technical or Mentoring ISO time if one chooses, but any portion of time counted as one ISO category could not also be counted as any other category. Trade consistency meetings are scheduled monthly as follows:
  - Building Consistency (Comm) – 1st Tuesday of every month @ 8am.
  - Building Consistency (Res) – 1st Wednesday of every month @ 8am.
  - Electrical Consistency – 2nd Wednesday of every month @ 8am.
  - Mechanical Consistency – last Tuesday of every month @ 8am.
  - Plumbing Consistency – last Wednesday of every month @ 8am.
- Reminder of deadline established for topic/question submissions to building consistency team:
  - Third Wednesday of every month.
  - Deadline set to allow team time to research/explain code logic behind decisions.
  - Submit by email to Jeff Vernon, Bldg Code Administrator jeff.vernon@mecklenburgcountync.gov
  - Submit online: http://charmeck.org/mecklenburg/county/LUESA/CodeEnforcement/Tools/Forms/Pages/ConsisTopicSubmit.aspx
- Training topics for future building consistency meetings, Comm (C) & Res (R). Topics in **bold** are approved to count toward CE credit hours; all topics count toward ISO hours.
  - **Aug 1 - (C) – Lateral Resistance & Design (Trina Agnello, PE)**
  - Aug 2 - (R) – Sales Offices & Model Homes (Jeff Griffin, Res Inspections Manager)
- Building code qualification classes at CPCC
  - 2017 July 21-23; Aug 5 & 6 – Level III
  - 2017 Sep 22-24; Oct 7 & 8 – Level II
  - 2017 Nov 17-19; Dec 1-3 – Level I
- Legal Training for CE/ISO provided by Joelle Jeffcoat again this coming winter; 4 sessions:
  - Jan 11-12, 2018
  - Jan 25-26, 2018
  - Feb 8-9, 2018
  - Feb 22-23, 2018
- The Residential Bldg Consistency meeting for Oct will be on **Oct 11th** due to scheduling conflicts.

Residential Consistency (3 review items, 9 new items) – 2 hrs of Tech ISO

1. **Open items or unresolved questions from last meeting:**
   a. **How does one properly post the permanent site address for a house?**
      - Per R319.1 it should be visible from the street or road fronting the property, have a contrasting background, and be a min of 4" high w/ min stroke width of ½".

- MCCE will not accept numbers placed on operable doors or on windows, or the use of Roman numerals; temporary addresses are only allowed during construction phase.
- In new housing developments, street signs shall be installed at final inspection of the first house build.
- Please see attached MCCE Code Interpretation.

b. How are plates/shims secured at piers?
- The State doesn't talk about shims but rather uses the word plates and requires them to be secured together and nailed to the girder to prevent movement (see attached DOI informal interpretation). MCCE Field Inspectors – please advise builders and don't automatically turn them down if you see one not nailed to the girder.
- Plates must be treated lumber & meet bearing surface req'mts; the max thickness is less than 4", masonry is req'd at 4" or greater.
- A Field Inspector asked if a plate under an LVL had to be of LVL mat'l. Jeff Vernon, Bldg Code Administrator, said yes.
    - Patrick Biddy, Plans Examiner, asked if LVL plates on interior piers had to be treated. Jeff Vernon & Brandon Burgin, Residential Inspections Supervisor, said no, but there would still need to be the req'd break between masonry & wood (flashing, etc.).

c. Is there another option for foundation anchorage when stud packs land where an anchor bolt is req'd to be?
- Simpson had developed new anchoring devices: the URFP/FRFP Retrofit Foundation Plates. These devices attach to the side of the mudsill plate and the conc foundation wall, and can replace a single ½" or 5/8" standard anchor bolt.
- These devices do not replace anchors on portal frame construction per the Manufacturer's documentation.
- Research is still being done to see if they can be used on solid CMU foundation walls.

2. What is the proper strapping when the top plate is cut, drilled or notched > 50% of its depth?
    a. Section R602.6.1 specifies the minimum plate/strap req'mts that are req'd to be fastened across the notched section of plate.
    b. Brandon Burgin, Residential Inspections Supervisor, said that Electricians often complain that the commonly used FHA plate product affects their wiring. The FHA plate is only one method. The code specified galvanized plate can also be used.
    c. Inspectors Marvin Snead & Eric Brown noted that the code text of R602.6.1 does not include electrical work in its description and that strapping at wiring has not always been called for in the past. After the meeting, Jeff Vernon, Bldg Code Administrator, contacted Bill Kirk at NC DOI who stated that it was his opinion that the strap is req'd when the top plate is notched > 50% for any reason.

3. Do we require an additional inspection to check the WSP on 3 story Townhomes where it is used for the shear wall?
    a. The shaft-liner of the rated assembly between Townhomes has to be inspected prior to installation the WSP.
    b. Brandon Burgin, Residential Inspections Supervisor, suggested allowing the WSP to be installed at the time of insulation inspection b/c insulation in those separation walls is only for sound & not energy compliance. Therefore, if the insulation is covered, it doesn't matter.

c. Jeff Vernon, Bldg Code Administrator, reiterated the importance of keeping good lines of communication open between the Contractor & the Inspector on a specific job.

4. When are permits required for accessory buildings?
   a. Per R101.2, accessory bldgs w/ any dimension (L x W x H) greater than 12' is req'd to comply with the 2012 NC Res Code, and therefore require permits.
   b. Accessory bldgs 400 sq.ft. or less & allowed to have floor systems on skids shall NOT have the floor system cantilevered.
   c. Skid & floor system materials for accessory bldgs shall comply with R317 for protection against decay.

5. What is the height limitation for the foundation of an Accessory Bldg?
   a. MCCE has been allowing dry-stacked cap blocks for leveling of accessory buildings in the past, and there was no set a height limitation. Due to projects in the field w/ questionable safety concerns, the max height of these stacked blocks shall be set at 18", which coincides with the min height for floor joists from grade (R317.1, #1). Once height exceeds 18", the blocks can no longer be dry-stacked.
   b. Patrick Biddy, Plans Examiner, further explained that the Code language intends the bldg to be supported on treated skids that are sitting directly on the ground with continuous contact. The allowance for conc pier blocks was created by MCCE to compensate for sites that cannot easily be made level.

6. When are guardrails required in a floored attic, when should the attic be labeled "Not for Storage", and what is req'd for attic flooring?
   a. See attached MCCE Code Interpretation from 9.5.2012.
   b. Per Attic Storage definition, the label "Not For Storage" is only used in attic areas where access is intended ONLY for appliance maintenance.
   c. Floor sheathing used in the attic has to meet the floor req'mts of R503 OR provide addt'l info from APA to confirm it is okay for the loading it will receive.
   d. Because MCCE looks at this as a "floor", blocking is req'd under all plywood seams at an HVAC platform or a floored attic unless the plywood is T&G.
      - A double layer of 7/16" sheathing, with each layer running in the opposite direction, has been allowed without blocking or T&G.

7. Is flashing required on masonry window sills?
   Section R703.8, item 1, allows the flashing to extend to the exterior OR just to the water-resistive barrier for drainage. Either is compliant.

8. What is the fireblocking req'mt in the wall at stair stringers?
   Although it is commonly installed, fireblocking in the wall along stair stringers is not req'd by the 2012 NC Res Code. Section 302.11, item 3, only requires it between the stringers at the top & bottom.

9. Where handrails pass by a tread nosing, does the 1 ½" clearance have to be maintained between nosing and handrail?
   a. Section R311.7.7.2 specifically says the clearance is between the wall and the handrail. Jeff Vernon, Bldg Code Administrator, said there is no direct req'mt to maintain it

between things like nosing & trim where they occurred, but he could see a possibility of creating at "pinch-point" at these locations that could be a hazard.

b. Several Field Inspectors voiced concern over not requiring the clearance at these locations. After the meeting, Jeff Vernon contacted Bill Kirk at NC DOI who said that the clearance shall be maintained from **ALL** surfaces along the length of the handrail.

10. **What are the code requirements for guardrails on walkways, stairs & upper level decks on piers?**
    Guardrails, stairs, & handrails on piers should meet the 2012 NC Res Code, however, notes on the diagrams in R324 use the term "recommended" in their specifications. This will be researched further for next month's meeting.

11. **Questions / clarifications / comments from the floor:** None.

Training Topic – No Training Today

- No training today due to Inspector workloads.

RESIDENTIAL CODE

INTERPRETATION

MECKLENBURG COUNTY
Building Code Enforcement

CODE: **2012 NC RESIDENTIAL CODE**

SUBJECT: **SITE ADDRESS**

REVIEWED: **RESIDENTIAL CONSISTENCY TEAM**

Question:
What is the correct way to post an address on a property? Where does it have to be located? Does it have to be on the house or can it be on a mailbox or post? What size are the letters / numbers required to be? Can the temporary address be up at the time of the final inspection?

Code reference:
Section R319.1 Address numbers

Answer:

Temporary addresses are only allowed during the construction phase, **permanent numbers** must be installed by the time of the building final inspection to verify compliance with the Code. The permanent address numbers shall be installed as follows:

1. Numbers shall be placed on a fixed non-movable surface on the Building Structure itself **facing** a road or street. Numbers are not allowed to be posted on operable doors.
2. Numbers shall **contrast** with their background. Numbers are not allowed on glass where the background colors may change, such as windows with curtains.
3. Numbers shall be a minimum of **4"** high with a minimum stroke width of **½"**.
4. Numbers shall be Arabic numbers or alphabetical letters *(examples shown below)*.
5. Numbers must be **plainly visible** from the road frontage, which may require numbers to be bigger (if needed) to be seen from the road *(see attached guide)*.
6. If structure is too far from the public travel way for reasonably sized numbers to be seen, the property owner/permit holder shall erect an additional set of numerals where the main driveway to the building intersects the public travel way. These address numbers must be legible from vehicles traveling at the posted speed limit on the public travel way. *Note: the numbers must be mounted on a fixed non-movable surface and meet all the requirements indicated in items 2-4 above.*
7. In new developments, NCDOT approved street signs must be in place at the time of the Building final inspection.

NUMBERING AND LETTERS

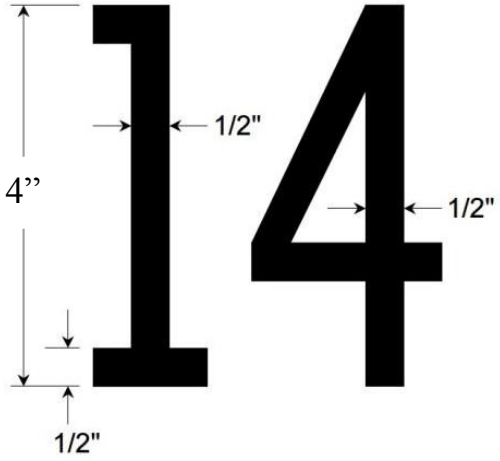
Arabic Numbers 0-9 and Alphabetical Letters

0123456789

Arabic numerals sans-serif

ABCDEFG

SIZE AND STROKE MINIMUMS



DISTANCE FROM THE STRUCTURE
STANDARD GUIDELINE*

DISTANCE FROM MIDPOINT OF STREET/RD	RECOMMENDED MINIMUM
0-100’	4”
101-150’	5”
151-200’	6”

***Distances over 200’ require marker at road/street**
****** Note: this is a guide only**

Approved By: _____

Jeff Vernon, MCP,CBO, Building Code Administrator

Date 9/27/2017

INFORMAL CODE INTERPRETATION

NC Department of Insurance
Office of the State Fire Marshal - Engineering Division
1202 Mail Service Center, Raleigh, NC 27699-1202
919-661-5880

Wood Girder Plates

Code: 2012 Residential Code
Section: R502.6

Date: July 3, 2012
Revised: March 28, 2014

Question:
Can wooden plates (not wedges) be used between wood girders and foundation piers?

Answer:
Yes. There is nothing in the code that prevents the use of wooden plates, but there is also nothing in the code that provides prescriptive design information for them either. The code does not restrict a wood girder from being out of level; so, we have to assume that plates to reduce that condition are a step in the right direction if the plates do not compromise the structural integrity of the pier/girder relationship.

The following guidelines will apply:

1. Plates would have to meet the requirement of Section R502.6 for bearing surface as well as applicable requirements for protection against decay in Section R317.
2. The minimum width of a plate must be the width of the girder that is being supported.
3. The minimum length of a plate must be the width of the pier on which it rests.
4. The maximum depth/thickness of a plate is restricted to less than 4 inches because of the available heights of standard masonry.
5. Multiple member plates (i.e. 2 or more pieces of wood stacked on top of each other) must have the members fastened together to form a single unit and the single unit plate must be fastened to the girder to prevent independent movement.
6. The plate material must be a minimum perpendicular to grain compressive strength equal to the wood girder material.
7. Horizontal forces are not resisted at the plate location.

For the purposes of this interpretation "wooden girder plate" is a flat member consisting of a single or multiple pieces of wood with relatively even thickness that is placed between the top of a pier and the bottom edge of a wood girder where it rests on the pier. This may also be referred to as a shim, but obviously cannot be of a wedge shape.

Keywords:
blocking, foundation

CODE

INTERPRETATION

MECKLENBURG COUNTY
Building Code Enforcement

CODE: 2012 NC RESIDENTIAL BUILDING CODE

SUBJECT: GUARDRAILS AT FLOORED ATTIC AREAS

REVIEWED: RESIDENTIAL CONSISTENCY TEAM

Question:
Is a guardrail required around floored attic areas used for homeowner storage or equipments accessed by catwalks

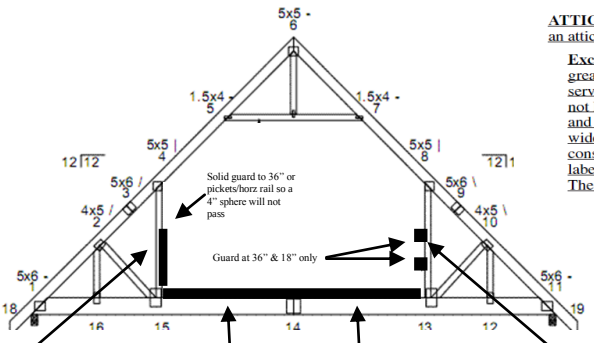
Code reference:
Chapter 2 definition for Attic storage, section R312 Guards, NCBC 1103.3 guard opening limitations.

Answer:

Yes, under certain situations a compliant guardrail system is required. 1) When the attic is accessible for a homeowner by means of a fixed stair or through a full size walk out door there needs to be a compliant guard installed per section R312 at 36" height and so that a 4" sphere will not pass through picket or horizontal railings. This is to protect the owner and children from falling off floored platform. If the flooring is pushed out to the rafter or truss top chord so that it is 36" or less in vertical height no guardrail is required. 2) If this same area is accessible by a scuttle hole, small smurf door or a pull down stairway homeowner access would be more limited and an alternate railing system similar to the NC Building Code section 1013.3 exception #4 for storage occupancies could be used which would require a guard at 36" and a midpoint guard at 18". Same issue if the platform/floor was installed over to the rafter or truss top chord so that there is 36" or less in vertical height from the edge of the platform then no guard would be required. 3) Third option is if the access is by scuttle hole, pull down stairs or smurf door to a catwalk for service of equipment in the attic this area would not be intended for homeowner access and no guard required (OSHA rules would govern contractor working in these areas). Size of catwalk and label required at opening is listed in Chapter 2 definitions for attic Storage.

ATTIC STORAGE. A floored area, regardless of size, within an attic space that is served by an attic access.

Exception: A floor walkway not less than 24 inches wide or greater than 48 inches wide that serves as an access for the service of utilities or equipment, and a level service space not less than 30 inches deep or greater than 48 inches deep and not less than 30 inches wide or greater than 48 inches wide at the front or service side of the appliance, shall not be considered as attic storage. Such floored area shall be labeled at the attic access opening, "NOT FOR STORAGE." The lettering shall be a minimum of 2 inches in height.



Access by fixed stair or walk out full size door guardrail required around floored area (see examples)

Floored area
Note: if floor is over to rafter or truss top chord so that from edge of subfloor to underside of rafter/truss is 36" or less no guard required

Access by scuttle hole, smurf door or pull down ladder (limited access for storage) can use guard at 36" and second horizontal guard at 18" (see examples)

Approved By Lon McSwain/Building Code Administrator Date 9/5/2012